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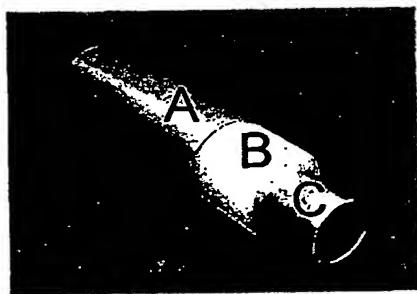
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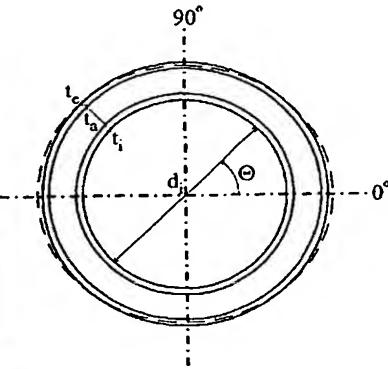
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(54) Title: SANDWICH PIPES FOR ULTRA-DEEP WATERS



(a)



(b)

(57) Abstract: This invention comprises a sandwich pipe, which consists of a tubular rigid system with three superposed layers (A, B, C), thermal and mechanical functions, to be used for the transportation of warmed hydrocarbons or general fluids in ultra-deep waters.

D_i (mm)	t_i (mm)	σ_{ut} (MPa)	t_e (mm)	σ_{re} (MPa)	t_a (mm)	P_{cr} (Mpa)
45.91	1.62	199.79	1.62	200.93	11.29	43.35
47.10	1.63	195.20	1.65	192.10	11.13	34.09
47.40	1.68	180.71	1.47	141.57	4.23	10.98
47.37	1.67	180.71	1.47	141.57	4.30	12.11
46.28	1.68	186.82	1.62	206.52	11.26	37.64
46.52	1.62	194.37	1.61	206.52	11.10	31.14
46.54	1.70	186.82	1.46	141.57	4.62	20.31
46.65	1.69	186.82	1.49	160.37	4.69	17.13

Table I

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